



SOUNDWELL®

<http://soundwell-cn.com>

# MA45 Series

## Magnetic Absolute Encoder



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## MODEL 品名

## DIMENSIONS 尺寸

UNIT:mm

MA450203XTA-FA5-000	<p>Technical drawings showing dimensions and connection table:</p> <ul style="list-style-type: none"> <li><b>Front View:</b> Shows height A (ø45.00), width B (33.50), and depth C (23.60). It also specifies that shielded lines must be wound around a tube, tightened, and protrude 4mm from the top.</li> <li><b>Side View:</b> Shows height A (ø45.00), width B (33.50), and depth C (23.60).</li> <li><b>Top View:</b> Shows outer diameter Ø40.00, bore diameter Ø3.50, and mounting hole spacing E (8.00<sup>+0.04</sup>-0). It includes a note for a 45° chamfer at the top edge.</li> <li><b>Bottom View:</b> Shows bottom thickness F (4.50/2.50) and mounting holes Ø8.50.</li> </ul> <table border="1"> <thead> <tr> <th colspan="3">端子/线束接线表</th> </tr> <tr> <th>序号</th><th>线束颜色</th><th>定义</th></tr> </thead> <tbody> <tr> <td>1</td><td>黑色-26AWG</td><td>5V-GND</td></tr> <tr> <td>2</td><td>红色-26AWG</td><td>5V</td></tr> <tr> <td>3</td><td>棕色-26AWG</td><td>BATT</td></tr> <tr> <td>4</td><td>白色-26AWG</td><td>BATT-GND</td></tr> <tr> <td>5</td><td>蓝色-26AWG</td><td>485+</td></tr> <tr> <td>6</td><td>黄色-26AWG</td><td>485-</td></tr> <tr> <td>7</td><td>屏蔽线</td><td>PE (屏蔽)</td></tr> </tbody> </table>	端子/线束接线表			序号	线束颜色	定义	1	黑色-26AWG	5V-GND	2	红色-26AWG	5V	3	棕色-26AWG	BATT	4	白色-26AWG	BATT-GND	5	蓝色-26AWG	485+	6	黄色-26AWG	485-	7	屏蔽线	PE (屏蔽)
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## ENCODERS MA45

Resolution 分辨率	One revolution single:Max. support 131072 (17 bit) 单圈信号: 最大支持131072 (17 位) Multi-turn signal:65536 (16 bit) 多圈信号: 65536 (16 位)
Output code 输出代码	Pure binary 二进制码
Communication protocol 通信协议	Tamagawa protocol 多摩川协议
Communication interface 通讯接口	RS485
Voltage 额定电压	DC 5V
Operating temperature 工作温度	-10°C to 105°C
Operating humidity 工作湿度	35% to 85%RH Non-condensation (无凝露)
Friction torque 起动转矩	≤1 mN•m(@ Specification Ta=20°C 温度在20°C)
Permissible operation rotational speed 容许主轴最高转速	≤6000rpm
Moment of inertia 转动惯量	≤0.68 kg•mm <sup>2</sup>
Absolute positioning accuracy 绝对定位精度	±0.1° (After correction 校正后)
Temperature Drift Coefficient 温度漂移系数	± 0.1° / °C
Ingress protection 防护等级	Dustproof: IP40 防尘型: IP40
Electrostatic discharge immunity test 静电放电抗扰度试验	Air discharge ±4 KV, Contact discharge ±2 KV
Mechanical life 机械寿命	≥1, 000, 000 cycles 1, 000, 000周以上
Electrical life 电气寿命	≥1000H